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A STUDY TO IDENTIFY SOME PERSONALITY CHARACTERISTICS
OF FRESHMEN ACADEMIC UNDERACHIEVERS
AT APPALACHIAN STATE UNIVERSITY

A Thesis
Presented to
the Faculty of the Department of Education
Appalachian State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in Guidance and Counseling

by
Despina Gus Demetriades

August 1967

William Leonard Furf
Appalachian Collection

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by

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Abstract

Numerous studies have shown that academically promising students often fail to make satisfactory progress in college. Both society and the individual suffer when potentially able individuals do not develop their skills to the extent that the larger community is provided with capable professional leadership. This study attempts to determine the rationale which explains academic underachievement at Appalachian State University.

Any such effort requires that the term academic under-achiever be operationally defined. In this thesis, the underachiever is a student who makes a combined score on the Scholastic Aptitude Test of 950, but fails to compile a grade point average of 2.0 or better on a four-point scale. The achiever is a student with comparable measured aptitudes who is making a 2.0 or higher average in his studies. A perusal of the literature dealing with underachievers revealed that the Edwards Personal Preference Schedule has been used at other institutions where this problem has been studied. Consequently the EPPS was selected for use in the study. Further research of the literature revealed correlations between self concept and academic achievement. To measure this variable, the Tennessee Self Concept Scale was administered to the sample at Appalachian State University.

Twenty-five matched pairs of student achievers and

underachievers were secured from the 1966-67 freshman class. Age, sex, Scholastic Aptitude Test scores, and grade point average were the criteria employed in pairing students. Sample size was restricted by both willingness of students to respond and the small universe from which students could be drawn. Hypotheses stated were that no significant difference would occur between total scores made by achievers and underachievers on the total score of the TSCS and the 15 variables of the EPPS. An open-ended questionnaire was given to discover whether or not socio-economic class differences were a factor in differentiating between the two groups of students.

The data derived from the study indicates that the mean score differences on the EPPS and the TSCS were not significant at the .05 level. In fact, underachievers scored higher in the TSCS than did achievers. However, the mean score differences on the EPPS did approach significance on the Intraception, Dominance, Deference, and Achievement scales. Apparently achievers have greater need than underachievers to succeed and tend to accept leadership proffered by authority figures. Underachievers tend to have a better understanding of the dynamics of their own and other people's behavior and have a greater need to exercise control over others. No significant socio-economic differences exist between the two groups and both achievers and

underachievers at Appalachian State University are typically from a high school with 800-900 students, live in small mountain counties, and come from working-class families.

Utilizing data derived from the thesis, a proposal is made for a cross-validation study during the 1967-68 school year, which would perhaps double the size of the sample and perhaps produce statistically significant differences on the EPPS variables, and provide a chance for further analysis of score differences on the TSCS. Assuming the cross-validation study supports the tentative hypotheses proposed in this study, the investigator recommends a program for working with potential underachievers once they are identified. This counseling activity would involve a personal adjustment course taught by graduate students in a junior college practicum.

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The 1957 revision of the Publication manual of the

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Chapter I

The Problem and Definitions of Terms Used

The academic underachiever is a problem to American colleges and universities today because he represents a point at which education in the United States fails in reaching its goal of guiding and aiding the student in developing himself and his academic potential (White House Conference on Education, 1965). Researchers have been working on various aspects of this problem in an attempt to identify factors which promote or cause a student to underachieve in his academic studies. As yet no set of personality factors has been identified; however, research is continuing. The present study was undertaken in an effort to identify common personality characteristics of academic underachievers at Appalachian State University.

Statement of the Problem

Are there any personality factors which are common among academic underachievers during their freshman year at Appalachian State University? If such common factors do exist, are the factors significant at the .05 level? The purpose of the study was to identify any personality factors which were common at the .05 level of significance among academic underachievers during their freshman year

at Appalachian State University.

Importance of the Study

Education in the United States exists for the progress of the democratic society (Hannah, 1962). In that the democratic philosophy of life does stress the importance of the individual and recognizes the rights of the minority as well as the majority, this paper will focus upon a problem in education which is both an individual and a group problem, the academic underachiever.

The problem of the academic underachiever is of an individual nature in that the academic underachievers are individual human beings. The problem is one of a group nature in that these individuals are being identified as a group because of their underachievement and their seemingly common personal characteristics and academic habits; thus they lose individual identification and become a group.

The academic underachiever presents a problem for educators and counselors. Educators strive to help the student to develop fully himself and his academic potential (Maritain, 1965) by introducing him to fundamental concepts, by presenting challenging problems concerning these concepts in order to stimulate his thinking, by providing the opportunity for independent study (Kimball, 1964), and by numerous other methods. Counselors strive for the same end, but the means of the counselors are more concerned with the

identification of any environmental or psychological problems which might affect the development of one's academic potential. Counselors aim to achieve this goal by helping the individual understand the obstacles which block his academic achievement, thereby helping him to cope with his problems and to develop his academic potential more fully (Rogers, 1951).

Furthermore, the academic underachiever represents a waste of time on the parts of both counselors and educators when he is not being helped. Also, he represents a waste of valuable space; that is, he is taking the place of some student who was rejected by the institution but who may have been successful in his work even though he possessed less academic potential.

Part of the responsibility in alleviating the stigma of waste that is associated with the academic underachiever is that of the institution which opened its doors to the student in the first place. The college or university, by offering a schedule of courses, obligates itself to present subjects using various techniques of teaching to account for individual differences in learning. For example, the conforming student requires a structured learning situation--i.e., a situation in which the instructor outlines the objectives and goals of the course and tells the student what is required during the term. Since all students are

not conformists, such a structured situation could be academically detrimental to the nonconformist who might rebel against being told what to do.

Institutional press (Stern, 1956) and its effect on students are problems related to the achievement of a person in college. Even though the institution establishes a series of requirements which must be fulfilled by the individual before he can become affiliated with the school, and even though the college determines and states its goals, these literal contentions may not be valid aspects of the press associated with the institution. Institutional press includes any of the roles, practices, and values of a certain institution.

The types of tasks in which the student must engage, the typical relationships which prevail between faculty and student, the behavioral trends which are consistently permitted or encouraged, define the true purposes of the institution far more clearly than the overt verbalizations concerning programmatic objectives which may or may not have been translated into relevant activities (Stern, 1956, pp. 39-40).

Thus, with regard to the achievement of a particular student, the person choosing a college must fully investigate the institution and evaluate his objectives and needs to assure himself of joining an educational setting which is conducive to his academic success through recognition of his potentials and needs. On the other hand, the college is responsible to itself and to the prospective

student to be cognizant of the institutional press which exists; the school must consider the needs of a prospective student and how well his needs could be gratified by offerings at the institution. Such an objective approach would probably eliminate an academic underachiever at one college by advising him to attend an institution whose press would be more in line with the needs and desires of the individual.

Considering the point of view of the institution toward the academic underachiever and the students' frame of reference, the present study attempts to identify some of the personality factors causing or promoting academic underachievement at Appalachian State University. Hopefully, such information would contribute to a better program of education for students enrolled.

Purposes of the Study

The purposes of this study were to identify the personality characteristics of freshmen academic underachievers at Appalachian State University and upon analyzing and interpreting the data to recommend the following proposals: (a) the results be used as local norms for a testing program of incoming freshmen at Appalachian State University to identify potential academic underachievers, and (b) a program for the prevention of academic underachievement be set up to serve the common needs of students identified as

potential academic underachievers.

To identify some of the personality characteristics of academic underachievers at Appalachian State University, 25 matched pairs of freshmen completed the EPPS, the TSCS, and an open-ended questionnaire. The following null hypotheses were established: (a) no significant difference exists between the self concepts of academic achievers and academic underachievers as identified using the Total P scale of the TSCS, and (b) no significant differences exist between academic achievers and academic underachievers on the EPPS variables of Achievement, Deference, Order, Exhibition, Autonomy, Affiliation, Intracception, Succorance, Dominance, Abasement, Nurturance, Change, Endurance, Heterosexuality, and Aggression.

The means and standard deviations were computed for the academic achievers and the academic underachievers for each of the 15 EPPS variables and for the Total P scale of the TSCS. The standard error of the means, standard error of the differences between the means, and the critical ratios were also computed for the two groups. The .05 level of significance was used to determine whether the mean differences were statistically significant. No computations were made using the information from the open-ended questionnaire as this inventory was used to ensure that no major socio-economic differences existed between

the two members of any pair.

Limitations of the Study

Where psychological tests are used in research, investigators are limited by the reliability and validity of the instruments which are presently available. Despite this handicap, the most reliable and valid tests make better than chance predictions. Validity and reliability studies in the EPPS and TSCS are presented in Chapter III.

The study has also been limited by the time factor in that (a) in order to assess better the academic achievement and potential of the sample subjects, another instrument comparable to the Scholastic Aptitude Test should have been incorporated into the study, and (b) the sample should have included more than 25 pairs which would require a sample composed of students from more than one freshman class.

Definitions of Terms

An academic underachiever is defined as a third-quarter freshman with a combined score of 950 or more on the verbal and quantitative subtests of the Scholastic Aptitude Test of the College Entrance Examination Board and one who has a grade point average below 2.0 (on a 4.0 scale) for his first quarters of course work at Appalachian State University.

The term EPPS is used to refer to the Edwards

Personal Preference Schedule which is an inventory of 210 different pairs of forced-choice statements covering 15 personality needs drawn from the manifest need list of H. A. Murray.

TSCS is used to refer to the Tennessee Self Concept Scale which is a self-administering instrument consisting of 100 self-descriptive statements which the subject uses to portray his own picture of himself.

SAT is used to refer to the Scholastic Aptitude Test of the College Entrance Examination Board which is a standardized test of developed abilities used to predict academic success in college.

The term freshmen refers to the subjects included in the sample, all of whom were between 18 and 20 years of age, were in their third quarter of work at Appalachian State University at the time of testing, and entered college in September, 1966.

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Chapter II

Review of the Literature

Many studies have been made since 1930 hypothesizing and identifying various personality factors which appear to be characteristic of academic underachievers in college. Because of changes and advances made in the American society and its educational systems, only studies directly related to the identification of common personality characteristics of academic underachievers in college, which have been made within the last ten years and reported in Psychological Abstracts, Dissertation Abstracts, or journals listed in the Educational Index have been included in the summary. Libraries used as resources for the review of literature were the Dauphin Disco Dougherty Memorial Library, Appalachian State University, Boone, North Carolina; and the McKissick Memorial Library, The University of South Carolina, Columbia, South Carolina.

Literature Related to the Self Concepts of Academic Underachievers

Many studies point to the factor of an immature, low, or negative self concept as characteristic of the academic underachiever. One such study has been reported by Congdon (1964). Using a sample of 178 freshmen who were taking a physics course at a state technological institution, Congdon

administered the Thematic Apperception Test to test the following three propositions which he established:

1. Functioning variations in pursuit of a goal are related to the degree of similarity a subject perceives between his own behavior and that of his parents.

Adequate functioning is associated with moderate similarity. . . .

Less adequate functioning is associated with extremes of either similarity or dissimilarity which reflects a negative parental evaluation and marked defensiveness in the parental relationship.

2. Functioning variations are related to the degree of reality orientation of the individual as demonstrated by a capacity of the individual for self-involvement in required tasks in contrast to the avoidance of such involvement.
3. Functioning variations reflect a degree of interpersonal disturbance as characterized by conflict or reaction formation.

The results relevant to the present study were as follows: (a) Students who were functionally most impaired and who were suspended from the university showed the greatest need for warmth and affection from the mother figure. According to Murray's theory (Hall and Lindzey, 1966, p. 174) individuals having a need for warmth and affection (called Succorance) want to be supported, loved, consoled, forgiven, and to remain close to a person who will protect them. (b) Students who became involved in the task manifest competent and adequate self concepts. Students who felt less competent and inadequate in the task

usually avoided it. The point made by the results is that the more a person is confident of himself and the more he thinks he can succeed at a task, the more he will at least try, even if he does not succeed. The possibility of failure is a fact, not a threat, to him; thus he has the ability to cope with failure, whereas one who does not have the ability to cope escapes by not trying. (c) Students who were functioning less adequately had less involvement with their age group than those students who were functioning adequately. The latter finding is related to Fink's (1962a) finding that academic underachievers feel socially alienated. Even though the feeling of social alienation may be distorted perception, the academic underachiever nevertheless feels it; thus he feels less secure with his peers.

Congdon's findings of a relationship between task competency and self concept is Fink's (1962a) study regarding the self concepts of college students and their academic achievement in which he notes a sex difference. Using matched pairs of academic achievers and underachievers, he administered the California Psychological Inventory and later objectified the data by item analysis (Fink, 1962b, pp. 105-112). The results show that a positive relationship does exist between self concept and the level of academic achievement, but the findings were more reliable for males.

In objectification of the data, Fink makes clearer the distinction between male and female underachievers than in his earlier study. Fink found that female underachievers are impulsive, poorly controlled, pleasure-oriented, feel socially alienated, and feel as though they are victims of circumstances. The female underachievers are not happy, feel as though they are misunderstood, do not recognize or accept others' goals or values (non-conformists), and see themselves as basically evil. On the other hand, Fink found that the underachieving male seems to be socially alienated, non-conforming, pleasure-oriented, feels inadequate, and is passive. He stated that sex differences do exist between male and female academic underachievers and that those statements immediately preceding are the differences; however, both groups of underachievers share social alienation, pleasure orientation, and being non-conforming as characteristics. The only sex differences appear to be that female academic underachievers are impulsive, poorly controlled, and feel as though they are victims of circumstances, whereas male underachievers feel inadequate and are passive.

In showing the relationship between self concept and academic achievement, Roth (1959) used 54 freshmen volunteers enrolled in a reading improvement course at the University of Texas as subjects in his study. The Q-sort

technique was used to determine the self concepts of each student before and after the reading program. Roth pointed out that according to Rogerian theory an individual who is being pressured to change his behavior--i.e., reading behavior--would do something about the pressure. In responding to this pressure, a student could do one of the following: (a) change his behavior to meet the demands of the situation; (b) distort the situation; (c) deny the situation, thus defending his self concept by avoiding the situation if it were a threatening one.

The hypothesis presented in Roth's study stated that the more defensive an individual was, the less he would improve in the reading program. The findings showed that students who improved had more consistent self concepts than those who did not improve, and those who did not improve were more defensive than the students who did.

Literature Related to Manifest Needs of the Academic Underachiever

Studies have been made which show a significant relationship between certain variables on the EPPS to the academic achievement and academic underachievement in individuals. Ward (1960) used 136 female freshmen divided into four groups: the low ability, high ability, low achieving, and high achieving groups. He administered the EPPS and other test instruments to the students. The following

findings are relevant to the present study: high achievers had a higher need to achieve than low achievers; thus the high achievers made higher scores on the Achievement variable of the EPPS than the low achievers.

Pepper (1958) hypothesized that there would be a significant relationship of the EPPS variables of Achievement, Deference, Order, Intraception, Dominance, and Endurance needs to academic achievement--i.e., the scores for these specific variables would be higher for academic achievers. Also, Pepper hypothesized that there would be a significant negative relationship of Autonomy and Heterosexuality needs with academic achievement--i.e., the academic achievers would make lower scores than the academic underachievers on these two variables. The sample consisted of 205 male college students who were given the EPPS. The results of correlation between the EPPS variables and academic achievement were significant at the .05 level of significance for the variables of Deference, Order, Intraception, and Endurance. For the Exhibition variable a negative correlation at the .05 level of significance was found, and for the Heterosexuality variable, the results were significant to the .01 level of significance. The academic underachiever scored significantly lower on the variables of Deference, Order, Intraception, Endurance, and Heterosexuality, but higher on Exhibition, than the academic achiever.

Gebhart and Hoyt studied the differences of academic achievers, underachievers, and overachievers of an all-male sample of 760 freshmen at Kansas State College. Grade point averages were predicted for students designating those who were expected to have a grade point average of .70 (on a 3.0 scale), and these students were classified as having low ability. Individuals for whom the predicted grade point average was greater than 1.30 were called the high ability students. The remaining students were grouped as average. The students were further divided into under- and overachievers. Individuals whose first semester grades were greater than those predicted were designated over-achievers; students making grades below the predicted were called underachievers.

Gebhart and Hoyt hypothesized that no significant differences would be found between groups on any of the EPPS variables. The results were as follows: (a) over-achievers were significantly higher on Achievement, Order, Intraception, and the Consistency variables, while (b) underachievers scored significantly higher on Nurturance, Affiliation, and Change. With regard to underachievers, the researchers hypothesized two patterns of underachievement: one being associated with a need for variety (Change variable), wherein academic studies may seem boring and routine, and the second pattern being associated with social

motives (Affiliation, Nurturance), wherein friendship would come before scholarship.

Lang (1962) also used the EPPS in his study of academic underachievers and achievers. The EPPS was administered to a sample of 67 male and 69 female college freshmen. At the end of their freshman year each student's academic achievement was rated on a five-point scale with respect to his estimated intellectual capacity. Eighty-one instructors in the various disciplines of the institution took part in the rating of the students. Lang pointed out that previous studies determined students' levels of achievement by noting the discrepancy, if any, between intelligence test scores representing predicted achievement and grade point averages constituting the actual achievement. Thus, Lang felt that the instructor ratings, as obtained for the study, might offer more meaningful and direct estimates of academic achievement. The analysis of data was based only on those subjects for whom five faculty ratings were obtained and who turned in usable EPPS data (having a Consistency score of 10 or better). For each of the 87 students in the final sample, a median achievement rating was determined. The lower the rating, the greater was the degree of underachievement.

Lang found that for female freshmen, academic achievement correlated positively with higher Achievement and

Dominance scores. His study showed that Achievement correlated negatively with Nurturance. For male freshmen, academic achievement correlated positively with Order, but negatively with Nurturance. All of the findings were significant at the .05 level of significance.

Another effort to discover significant differences between the manifest needs of achievers and underachievers in college was made by Demos and Spolyar (1961). The EPPS was administered to 245 freshmen at a state college. The sample was selected on the basis of their status as one of the following: achiever, overachiever, underachiever, non-achiever. The results showed no significant differences between any of the variables for any of the groups. Considering the work of the other researchers in this area, as well as their own research, Demos and Spolyar interpreted the results of the study to mean that one or more scores from an aptitude test assumes stability of one's potential in all subjects. Such scores also assume high correlation between grade point average and the test score; however, the researchers maintained that no test of mentality can designate the level at which a student should be achieving.

Other attempts to discover manifest needs common among academic underachievers have been made using instruments other than the EPPS. One such study was made by

Flaherty and Reutzel (1965) using the California Psychological Inventory (CPI) to discover which non-intellectual aspects of personality related to intellectual achievement. The inventory was administered to 149 female college students selected on the basis of grade point average calculated at the end of the freshman year. The students were then divided into two groups, the high achievers and the low achievers. For the 18 scales on the CPI, the following traits were found to be significantly higher for the high achievers: dominance, capacity for status, sociability, self acceptance, responsibility, tolerance, achievement by conformity, achievement by independence, intellectual efficiency, and femininity. The low achievers scored significantly higher on the flexibility scale. The high scores on the dominance and on both achievement scales of the CPI appear to be the same needs as the variables designated in the EPPS as Dominance and Achievement, respectively.

Another study which can relate to certain EPPS variables is one by Todd, Terrell, and Frank (1962). The study involved 244 University of Colorado sophomores, juniors, and seniors, unpaired, but grouped into two groups of males and females with subgroupings of achievers and under-achievers. They took the Goal Preference Inventory, the Inventory of Expectations, and the Vocational Goal

Questionnaire. The study was a test of four hypotheses; however, only the first hypothesis is relevant to the present study. The hypothesis stated that "Underachievers will reveal a greater need for love and affection in social situations and less need for recognition status in academic situations than will normal achievers" (Todd, Terrell, and Frank, 1962, p. 186). The difference was significant between male achievers and underachievers on the need for academic recognition, with the higher score made by achievers; this significant difference was also noted for the need for love and affection, but the higher scores were made by the underachievers. The need for love and affection incorporates a major aspect of the EPPS variable of Succorance.

Powell and Jourard (1965) also conducted a study from which inferences can be made with regard to certain EPPS variables. The subjects were 40 unmarried male and female students at the University of Florida. Only those subjects with 400 or better on the Florida 12th Grade Placement Tests were included in the group. The two groups were divided into male achievers and underachievers, and female achievers and underachievers. The Ainsworth Test of Security in Personal Adjustment and a modified version of the Jourard Self-Disclosure Questionnaire were administered to the subjects. The findings were that underachievers would

disclose more to their parents while achievers disclosed more to their friends. Thus, the study concluded that underachievers are more immature and dependent than achievers. The male achiever scored higher on independence and dominance. Female subjects corresponded to cultural expectations of females as more dependent, submissive individuals. The achieving females appear able to accept this role in a more adequate manner than the underachieving females. In summary, underachievers as seen in this study appear to be immature, dependent persons who experience difficulty in sex-role identification and who are unable to form meaningful relationships with peers.

Summary

In summarizing the review of literature, academic underachievers appear (a) to have a need for warmth and affection, (b) to be dependent on others, (c) to be non-conformists, (d) to be pleasure-oriented, (e) to be defensive, (f) to feel socially alienated, (g) to feel inadequate, (h) to have less peer involvement.

The need for warmth and affection and the characteristic of dependency in academic underachievers are manifestations of the need for Succorance. Succorance was hypothesized by Murray (1938) to denote the need for support, guidance, love, protection, and other similar actions of assistance and comforting by others. Having based the

EPPS variables on Murray's list of needs, Edwards adapted Murray's definitions to the EPPS variables. Therefore, since academic underachievers score high on the Succorance variable, they manifest the need to feel loved, need to be guided, supported, and protected; generally they are dependent on some other individuals for comfort and assistance.

Academic underachievers also appear to be characterized by their non-conformity, which, according to Murray, is characteristic of a low need for deference; thus the academic underachiever would score low on the Deference variable. Academic underachievers generally reveal the needs which would be indicated by a low Deference score such as the need not to conform; however, the academic underachiever also manifests the need to be a follower instead of a leader, shown by his dependency on others for guidance and assistance and indicated by a high score on the Succorance variable, as well as a high score on Deference. A contradiction, or at least some state of confusion, appears to exist with regard to the Deference variable in that both the characteristic of independency of non-conformists (low Deference score) and the dependency of conformists (high Deference score) seems to be operating in the same variable. Some question might arise as to the reliability of the Deference variable; however, for the purposes of this study the results regarding the Deference

variable with underachievers at Appalachian State University will be interpreted recognizing the aforementioned assertion.

Feelings of inadequacy may account for the academic underachiever appearing to have less peer involvement and feelings of social alienation. Negative feelings toward one's self, such as feelings of inadequacy, are indicative of having a low self-concept, and low self concepts are characteristic of academic underachievers.

Thus, conclusive evidence regarding the manifest needs and the self concept of the academic underachiever does not exist; through inference, theorizing, and research, steps can be made toward obtaining conclusive evidence.

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Chapter III

Design of the Study

The 25 pairs of students for the sample were selected from the 1966-67 freshman class at Appalachian State University and matched on the basis of sex and Scholastic Aptitude Test scores. For example, a male who had scored 550 on the Quantitative subtest, 520 on the Verbal subtest, and had a grade point average of 2.96 (on a 4.0 scale) for his first two quarters of course work at Appalachian State University was paired with another male whose score on either subtest of the SAT did not vary more than 30 points from the corresponding subtests of the formerly mentioned male, but whose grade point average was below 2.0 (the academic underachiever). Thus, the scores on the SAT were neither greater than 580 on the Quantitative, or 550 on the Verbal subtests, nor less than 520 or 490 on the two subtests respectively for the latter male subject.

To identify the personality characteristics of academic underachievers at Appalachian State University, the Edwards Personal Preference Scale (EPPS), the Tennessee Self Concept Scale (TSCS), and a partially open-ended questionnaire were administered to male and female pairs of third-quarter freshmen academic achievers and academic underachievers.

Sources of Data

The EPPS employs a forced-choice format of 210 different pairs of statements measuring 15 personality variables and pairing the variables against one another, thereby quantifying the relative strength of an individual's competing needs. The subject's consistency is estimated by the reappearance of 15 test items to which he responds. For each consistent response the subject makes to the 15 items, he receives a point. The higher the total number of points which the subject accumulates, the more consistent are his responses.

The EPPS purports to have checked the operation of a social desirability factor. Consequently, a subject taking the scale would not project a better image by always choosing the statements which are most acceptable, because the paired items have equal appeal as determined by empirical procedures. Edwards administered to 140 students an inventory of unpaired statements which had been scaled for degree of social desirability and asked them to respond "Yes" or "No" to each statement with regard to how characteristic the statement was of himself. The method of successive trials, which was employed in scaling for the degree of social desirability, yielded a psychological continuum of social desirability on which the statements could be placed. The socially undesirable traits were said to be

located on the continuum as those statements with low social desirability scale values, whereas statements of high social desirability scale values represented socially desirable traits.

Edwards (1959, pp. 22-24) maintained that the factor of social desirability was being controlled; however, Anastasi (1966, pp. 515-516) pointed out that failure to re-check the SD (social desirability) scale values of Edwards' statements when presented in pairs is the reason he did not realize that SD values could be in operation. Anastasi further mentioned that significant differences exist in SD scale values of paired items, as well as a correlation of .88 between the scale values of items after having been paired and redetermined, and their frequency of endorsement.

To complete a research study of the SD scale, Silverman (1957) administered to 98 male undergraduates the Manifest Anxiety Scale, the K scale of the Minnesota Multiphasic Personality Inventory (MMPI), and the EPPS. Using the Manifest Anxiety Scale and the K scale of the MMPI (both scales are measures of social desirability), the experimenter compared social desirability and the 15 EPPS variables. Supporting the findings of Edwards, Silverman said that social desirability plays only a slight role in influencing some of the EPPS scores.

Further evidence in support of Edwards' original finding was made when Kelleher (1958) administered the EPPS and the Social Desirability Scale to 101 male and 101 female college undergraduates to determine whether social desirability played a role in item responses on the EPPS. Computing point-biserial correlations separately for each sex between the SD scale score and choice of A or B for each of the 210 different item pairs, Kelleher found only slightly greater than chance occurrence of significant correlations.

The experimenter then computed the higher social desirability (HSD) score by counting the number of times the individual chose the more socially desirable response in a pair, no matter how small the difference. The results yielded insignificant correlations for the SD scale scores and HSD scores for each sex. Kelleher concluded that social desirability played an insignificant role in item responses on the EPPS.

Stephenson (1953) made a validation study of the EPPS by asking students to do Q sorts of themselves following his instructions. The statements used in the Q sort were from the EPPS. By correlating the self-ratings with scores on the EPPS for each student, the results showed a high degree of agreement for others. The factor of social desirability definitely entered into the Q sorts of the

students showing little or no degree of agreement.

There was a definite tendency on the part of some subjects doing the Q sorts to regard the statements with the higher social desirability scale values as being most characteristic of themselves and those with low social desirability scale values as being least characteristic (Edwards, 1959, p. 21).

Thus, evidence has been presented for both positions in regard to the SD scale. The researcher using the EPPS must take this factor into consideration by realizing that the possibility does exist that the SD variable may be operating.

A reliability study of the EPPS conducted by Edwards (1959, p. 19) involved administration of the EPPS to 1509 college students. Split-half reliability coefficients were secured for the 15 variables. The internal consistency coefficients were corrected by the Spearman-Brown formula. Results showed no variable with a reliability coefficient below .60 (Deference) with most above .76. Edwards (1959, p. 19) also administered the EPPS to 89 students at the University of Washington twice in a one-week interval. The stability coefficients resulting showed no coefficient below .74 (Achievement) with most above .77.

A validity study of the EPPS (Bernadin and Jessor, 1957) required subjects to go through three experimental task situations which simulated the demonstration of independent or dependent behavior. High scores on Deference

and low scores on Autonomy were characteristic of subjects who relied more on other people for approval and help. The researchers found no relationship between the Deference and Autonomy scale scores and conformity to the opinions and demands of others.

Related to the validity of the Deference and Autonomy subscales of the EPPS is Gisvold's validity study (1958) in which a criterion measure of conformity behavior was correlated with the two subscales. The results found that the Autonomy subscale as described by Edwards was empirically valid when considering the criterion of conformity behavior developed for Gisvold's study. For the Deference subscale the result was that an individual having a need for Deference would not necessarily exhibit an equal need to conform to group situations.

The items in the EPPS are designed to measure the strength of 15 of the 20 manifest needs as proposed by H. A. Murray (1938). Manifest needs are defined by Murray (1938, p. 145) as ". . . the amount of externally exhibited activity." More specifically, need is defined in Murray's system as a hypothetical construct which represents a force in the brain by which perception, apperception, intellection, conation, and action are organized to change and redirect an existing, unsatisfying situation (Murray, 1938, pp. 123-124). The manifestation of a need is seen by the

organism's response to search for, to avoid, or to attend and respond to certain kinds of press.

Following is the list of the 15 need variables which are employed by Edwards and a brief description of each:

1. Achievement: to be successful in a task requiring skill, to accomplish something worthwhile, to perform work to a high degree of accuracy and efficiency.

2. Deference: to eulogize others, to conform to custom, to be respectful and compliant; to accept the leadership of other individuals, to yield to the influence of an ally.

3. Order: to be organized and neat in one's work, to be restrained in manner.

4. Exhibition: to be impressive, to act so as to be noticed by other people.

5. Autonomy: to be independent, to feel free to act as one desires, to be critical of authority and avoid activities prescribed by domineering authorities.

6. Affiliation: to be sociable, to do things for other people, to enjoyably cooperate with a friend.

7. Intraception: to be subjective as in analyzing one's feelings, to be empathetic, to be psychologically penetrating and attempt to predict the behavior of others.

8. Succorance: to desire or ask for protection, love, or nourishment from other people, to have another person as a supporter.

9. Dominance: to desire to control one's environment, to influence others by demand, suggestion, and persuasion, to supervise other people.

10. Abasement: to belittle one's self, to take the blame, to feel shameful and guilty, to enjoy punishment, pain, and misfortune.

11. Nurturance: to be sympathetic to the needs of other people, to be compassionate, protective, tolerant.

12. Change: to desire to do and see new and different things and people, to seek novelty.

13. Endurance: to be persistent in one's work and in his actions.

14. Heterosexuality: to enjoy activities with the opposite sex.

15. Aggression: to attack another person verbally, to be argumentative, resentful, vindictive, critical, disagreeably domineering.

To review briefly what has been said concerning the EPPS and the present study, the scale was administered to the sample of freshmen academic achievers and underachievers to denote any significant differences which might exist between these two groups with respect to the aforementioned 15 manifest need variables. The EPPS has been used as a research tool in the study, thus is being used in accordance with the thinking related to the instrument by such authorities as Anastasi (1966, p. 518) that for research work the scale is valuable; however, in that the validity studies are limited, use of the results of the EPPS in practical situations, such as counseling, should not be thought of as conclusive or completely valid.

The TSCS is a self-administering instrument consisting of 100 statements by which the subject describes his own self-image. Each statement is rated by the subject on a five-point scale ranging from completely false to completely true with regard to himself. Thus, the instrument aids in the quantification of one's self concept and makes

possible the identification of existing significant differences between the self concepts of academic achievers and academic underachievers. The TSCS offers two forms of answer sheets, a Counseling Form and a Clinical and Research Form (C and R Form). The C and R Form deals with more variables than the Counseling Form and the scores are not so easily used in direct interpretations to counselees. Both answer forms use the same question booklet for testing.

In the present study only the Total P variable was used to provide data about the subjects' self concepts. The Total P scale reflects the individual's perception of his self esteem. Low scores on the Total P scale denote doubt of one's own worth, perception of one's self as undesirable, feelings of anxiety and depression, and lack of confidence. High scores on the scale portray an individual who has confidence in himself, perceives himself as valuable and worthwhile, and one who acts accordingly.

No validity studies have been published relative to the TSCS. The Manual of the TSCS (Fitts, 1965, pp. 17-30) reports the following four kinds of validation procedures: (a) content validity, (b) discrimination between groups, (c) correlation with other personality measures, and (d) personality changes under particular conditions.

The TSCS was developed by William H. Fitts and the Tennessee Department of Mental Health by taking a pool of

items from other self concept inventories, as well as items from written self descriptions of patients and non-patients. Much study was done on these items; then the researchers developed a phenomenological system for classifying items on what the statements were saying. The result was a two-dimensional, three-by-five scheme employed on the score sheet of both forms and consists of 90 items equally divided as to positive and negative items. The Self-Criticism Scale comprises the remaining 10 items.

Seven clinical psychologists classified the edited items according to the three-by-five scheme and judged each item as to whether the item was positive or negative in content. The 90 items used in the scale are those items which were in perfect agreement by the seven psychologists.

Unpublished validity studies showing discrimination between groups are reported in the Manual of the TSCS (Fitts, 1965, pp. 17-24) and do reveal discrimination on the basis of psychological status (dealing with psychiatric patients and non-patients), discrimination within patient groups, and discrimination between non-psychiatric groups. An example of the latter group was a study mentioned in the Manual of the TSCS (Fitts, 1965, p. 24) by Gividen showing that a number of TSCS scores differentiated soldiers who could withstand the stress of paratrooper training and those

who could not.

Many unpublished correlation studies of the TSCS with other measures have been made. For example, the Manual of the TSCS (Fitts, 1965, p. 24) states, ". . . most of the scores of the Scale correlate with MMPI scores in ways one would expect from the nature of the scores." On the other hand, correlations between the EPPS and TSCS scores were low; however, the manual pointed out that the nature of the two scales was "such as to contraindicate very many high linear correlations. . . furthermore the extreme high and low scores on both instruments would be correlated" (Fitts, 1965, p. 24). With regard to the P Scale of the TSCS and the EPPS variables, correlations were significant at the .05 level for Affiliation and Nurturance, and at the .01 level for Achievement and Autonomy. Correlations were based on scores made by 66 students from three different high schools. From the evidence reported in the Manual of the TSCS, the instrument appears to be relatively valid for counseling and a valuable tool for research work in mental health research.

The SAT was used in this study because it is a standardized test of developed abilities and a well validated predictor of scholastic achievement in college. The cut-off score used was arbitrarily selected, but does exceed the combined mean SAT score of 940 made by the 1966-67

freshman class at Appalachian State University. Because 940 was the mean of the freshman class, and since the typical member of the freshman class was making at least a 2.0 grade point average, the experimenter assumed that students making a combined SAT average of 950 or better had the mental ability to make a 2.0 grade point average or higher. Statistics supporting the assumption were obtained for the 1965-66 freshman class of Appalachian State University from William A. Floyd, director of testing (see Tables A, B, and C, Appendix pp. 71-76).

In selecting the pairs of students with regard to the SAT scores, no variation of more than 30 points for either the Verbal, Quantitative, or combined scores between the two members of a pair was permitted because each subtest of the SAT has a standard error of measurement of 30 points (College Board Score Reports: A Guide for Counselors, 1962, p. 17). Standard error of measurement means that the subject's true mean score is most probably within a range of 30 of the score which he made. For example, a student making an SAT Verbal score of 510 should be considered in the scoring range of 480-540. Thus, for the student to be compared with another student, the latter's score must fall within the score range of the former student.

In the sample, one exception to the 30 point variance

limitation was permitted for two male students. The member of the pair having better than a 2.0 had a Verbal SAT score of 602, a Quantitative score of 617, and a combined score of 1279. The other member who had a lower grade point average had a Verbal SAT score of 695, Quantitative score of 608, and a combined score of 1303. The exception applies to the Verbal scores which differ by 33 points, three points more than the standard error of measurement. Since the higher score was made by the member of the pair with the lower grade point average, and since the scores were above 600, signifying that both students were of superior ability, the pair was included in the study.

To account for any extreme socio-economic differences between any members of any of the pairs, an open-ended questionnaire was constructed. A reproduction of the questionnaire appears in the Appendix (see Appendix, p. 77).

The grade point averages of the subjects were obtained from O. K. Webb, Jr., dean of student affairs at Appalachian State University. SAT scores were obtained from J. D. Lacey, director of admissions at Appalachian State University.

Methods of Gathering Data

An arbitrary combined cut-off score of 1000 on the SAT was set for reasons previously stated. SAT scores for the 1966-67 freshman class of Appalachian State University were obtained from the director of admissions. Names of students

having a combined score of 1000 or more were selected from the master roster. Grade point averages for the first two quarters of work were secured for each student through the cooperation of the dean of student affairs. Students were paired by sex, SAT scores, and on the basis of grade point averages. Students having a 2.0 grade point average or better were classified as academic achievers, while those students with less than a 2.0 grade point average were designated the academic underachievers. The academic achievers were paired with academic underachievers of the same sex and with similar SAT scores. The phrase similar SAT scores means that neither the combined nor the subtest scores of the SAT varied more than 30 points from the score made by the other member of the pair. Reasons for the 30-point variance limitation have been discussed.

After the names of the paired subjects had been selected, O. K. Webb, Jr., dean of student affairs, sent out letters to the 29 selected pairs urging them to participate in the study by completing certain psychological tests (see Appendix p. 79 for a copy of the letter). From the 58 individuals requested to cooperate, 31 appeared for the first testing session. From the 31 individuals, nine pairs were included in the sample.

The experimenter again solicited aid, and Webb sent letters to those students who failed to report to the first

testing session requesting them to come in for an appointment. Each individual who responded was asked whether he would cooperate. If the individual answered affirmatively, he was told to indicate the date and time most suitable for him to take the required tests. The second plea added 11 individuals to the sample permitting the designation of eight more pairs.

Still being short of the desired minimum of 25 pairs, the arbitrary cut-off score of 1000 was dropped to 950 for the combined total of the SAT Verbal and Quantitative subscores. Using the same procedure for selecting subjects with combined scores of 950-999, and having retained the list with names of students having 1000 or better in the event that any subjects could have been taken from that list, the experimenter then paired the subjects on the basis of sex and SAT scores, and sent letters (see Appendix p. 80 for a copy of the letter) to 40 additional students requesting their cooperation in the project. From this group, 19 individuals were obtained for testing and seven more pairs were added to the total sample. One further letter was necessary for those students in the 950-999 group who did not report the first time. Two additional respondents did cooperate, and the desired minimum of 25 pairs was reached, consisting of 32 males and 18 females.

The EPPS was hand-scored while the TSCS answer sheets

were scored by computer at the University of Tennessee. Only arithmetic calculations were made from the open-ended questionnaire which was used to account for any extremes of a socio-economic nature which might be a major contributing factor to the academic underachievement of any individual in the sample.

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Chapter IV

Presentation and Analysis of Data

A concise presentation of the data acquired in the study has been presented in tabular form in the following pages in tables. The data presented in the tables have been expounded upon in the text in an attempt to make the results more easily understandable to the reader.

To identify some of the personality characteristics of academic underachievers at Appalachian State University, 25 matched pairs of freshmen completed the EPPS, and TSCS, and an open-ended questionnaire. The following null hypotheses, acceptable at the .05 level of significance, were established: (a) No significant differences exist between the self concepts of academic achievers and academic underachievers on the Total P scale of the TSCS. (b) No significant differences exist between academic achievers and academic underachievers on the following EPPS variables: Achievement, Deference, Order, Exhibition, Autonomy, Affiliation, Intraception, Succorance, Dominance, Abasement, Nurturance, Change, Endurance, Heterosexuality, and Aggression.

The means and standard deviations were computed for the academic achievers and the academic underachievers for each of the 15 variables on the EPPS and for the Total P scale of

the TSCS. The standard error of the means, standard error of the differences between the means, and the critical ratios were also computed for the two groups. No computations were made to analyze the differences between the responses given by achievers on the open-ended questionnaire. The purpose of the self-report inventory was to note any major socio-economic differences among pairs. Such a major difference would exist when the source of income--e.g., denoted by the father's occupation, of one member of the pair ranked number two on the "Source of Income" Table (McGuire, C., & White, G. D., 1955, p. 8) while the source of the other member ranked five on the Table. For the sake of clarification, an adaptation of the "Source of Income" Table has been presented (see Appendix p. 81). For instance, referring to the occupations typical of each rank in the preceding example, one can see that a dyer in a cotton mill is an occupation typical of rank five on the "Source of Income" Table. Rank two would be exemplified by an occupation such as one who has made his money by investing it in the stock market.

Test Results

In considering the sample with regard to similarity between the two groups on SAT scores, the means for each subtest and the combined scores for the academic achievers and academic underachievers were calculated. The results

revealed that the respective scores were nearly identical for the academic achievers and academic underachievers. The small differences in the respective mean scores were evidence that the two groups were comparable with regard to SAT scores (see Table 1).

Results obtained on the open-ended questionnaire suggest that the students in the sample can generally be described as coming from Protestant, middle-class backgrounds, and having graduated from high schools with an average enrollment of 943 students. The mean chronological age of the students was 18.5 years (see Table 2).

Total P scale scores on the TSCS show no significant difference exists between the self-esteem of academic achievers and academic underachievers. The null hypothesis is accepted at the .05 level of significance with regard to the Total P scale of the TSCS (see Table 3).

Statistical data computed for each of the 15 EPPS variables show no significant difference exists between the academic achievers and academic underachievers; thus the null hypotheses are accepted with regard to each variable at the .05 level of significance (see Table 4). Four variables approached significance at the .05 level showing that academic achievers tend to score higher on the Achievement and Deference scales while academic underachievers tend to score higher on Intracception and Dominance.

Table 1
Mean Scholastic Aptitude Test Scores of Freshmen
Academic Achievers and Underachievers at
Appalachian State University 1966-67

Group	Verbal	Quantitative	Combined
Academic achievers	508.16	544.52	1052.47
Academic underachievers	510.28	543.96	1053.24

Table 2

Results of the Open-ended Questionnaire Administered to
Freshmen Academic Achievers and Underachievers
at Appalachian State University 1966-67

Religious affiliation	No. of Students	Income	No. of mothers	No. of fathers	Enroll- ment	No. of students	Loca- tion	Homes
Baptist	23	1	0	0	200	3	Mtns. of N.C.	22
Methodist	7	2	0	0	300	1		
Presby- terian	7	3	0	8	400	1		
Catholic	4	4	20	20	500	5		
Lutheran	3	5	9	14	600	2	Pied- mont N.C.	17
Congrega- tional		6	0	0	700	3		
Christian	1	7	0	0	800	4		
Quaker	1	other	15	2	900	5		
No affilia- tion	0	Total	44	44	1000	5	Out of state	5
					1100	2		
					1200	3		
					1300	2	Total	44
					1400	2		
					1500	4		
					2000	1		
					2500	1		
					Total	44		

Note: All questionnaires were not returned, thus accounting for only 44 students. Parents' incomes rated according to McGuire and White's "Source of Income" Table.

Table 3
Statistical Results on the Tennessee Self Concept Scale P Scale
for Freshman Academic Achievers and Underachievers
at Appalachian State University 1966-67

Statistical computations	Academic achievers	Academic underachievers
Mean	319.40	329.92
Standard deviation	30.96	27.54
Standard error of the mean	6.32	5.62

Standard error of difference for achievers and under-
achievers 8.46.

Critical ratio for achievers and underachievers 1.24.

Table 4

Statistical Results for 15 Edwards Personal Preference Schedule Variables
for Freshman Academic Achievers and Underachievers
at Appalachian State University 1966-67

Variables	Mean		Standard deviation		Standard error of mean		Standard error of difference	Critical ratio
	A*	U**	A	U	A	U		
Achievement	14.96	12.64	4.64	4.17	.95	.85	1.27	1.83
Deference	10.80	8.84	3.81	3.14	.78	.64	1.01	1.94
Order	7.80	7.68	4.35	4.06	.89	.83	1.22	.10
Exhibition	13.76	14.64	3.70	3.33	.76	.68	1.02	-.86
Autonomy	15.20	16.20	5.08	5.91	1.04	1.21	1.60	.62
Affiliation	16.68	17.04	3.86	4.13	.79	.84	1.15	-.31
Intraception	14.52	16.76	4.31	3.87	.88	.79	1.18	-1.90
Succorance	13.20	13.04	4.87	5.36	.99	1.09	1.47	.11
Dominance	11.88	13.88	5.04	5.41	1.03	1.10	1.51	-1.91
Abasement	14.28	15.28	5.55	5.67	1.13	1.16	1.62	.62

Table 4 (Continued)

Nurturance	16.24	17.20	4.31	5.68	.88	1.16	1.46	.66
Change	18.08	16.80	4.18	4.59	.85	.94	1.27	1.01
Endurance	11.96	10.08	4.80	4.61	.98	.94	1.36	1.38
Hetero- sexuality	18.16	17.80	6.58	5.99	1.34	1.22	1.81	.20
Aggression	12.04	12.48	5.12	4.06	1.04	.83	1.33	.33

*A denotes academic achievers.

**U denotes academic underachievers.

Interpretation of Results

Data from the questionnaire indicates that the typical subject in the sample is a student 18.5 years of age from a Protestant and middle-class home who lives in one of the mountain counties of North Carolina. The average school from which the subject graduated enrolled between 800-900 students. The mean combined score for the sample subjects was 1052.86 on the SAT which is about 113 points higher than the combined mean for the 1966-67 freshman class at Appalachian State University.

The critical ratio of difference between scores made by academic achievers and academic underachievers showed no significant difference between the two groups on the Total P scale of the TSCS. These findings can be interpreted to mean that the self-concepts of academic underachievers are neither better nor worse than those of academic achievers. Thus, the relatively high or low self concept is not an identifying characteristic of the academic underachiever at Appalachian State University.

The mean and standard deviation of the TSCS norm group were 345.57 and 30.70, respectively, on the Total P scale. The means and standard deviations of the academic achievers and academic underachievers on the Total P scale were 319.40 and 30.96, 329.92 and 27.54, respectively. Thus, the mean scores of the study sample were lower than the

mean score for the norm group. The total student group appears to have a poorer self concept than the norm group. However, the study sample was a homogeneous student population group as compared to the normative sample which included 626 people from various parts of the country with ages ranging from 12 to 68 and levels of education ranging from sixth grade through the Ph.D. degree.

The most that can be inferred from the results of the data is that the academic achievers tend to have somewhat poorer self concepts than the underachievers. No formal attempt is made to hypothesize the reason for such results, but the suggestion is made that the academic underachiever may be viewing himself less realistically, or the academic achiever may be degrading himself, thus lowering his self-esteem.

The results of the data on the 15 EPPS variables yielded no statistically significant differences between academic achievers and academic underachievers for any of the manifest needs. Four variables did approach the .05 level of significance--i.e., achievers tended to score higher on Achievement and Deference while academic underachievers tended to score higher on Intraception and Dominance. The academic achiever appears to have some need (a) to achieve, (b) to be recognized, (c) to receive help and suggestions from others, (d) to conform, to do

what is expected and acceptable to his environment. The academic underachiever tends to need (a) to empathize, to analyze and to predict the behavior of other people, (b) to be regarded as a leader and to be a leader, to supervise, argue with, persuade, and influence other individuals.

Summary

In summarizing the results, tentative hypotheses and suggestions for further study can be discussed with regard to the personality characteristics of academic achievers and academic underachievers. No statistically significant differences were obtained on any of the variables considered on either the TSCS or the EPPS. Inferences have been made when variables approached significance; however, the reader must understand that statistical data approaching significance are definitely inconclusive and open to further investigation and research.

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Chapter V

Summary and Conclusions

To identify some personality characteristics of academic underachievers, twenty-five pairs of college freshmen, matched on the basis of SAT scores, grade point averages, and sex, yielding one group of academic achievers and one group of academic underachievers, completed the EPPS, TSCS, and an open-ended questionnaire. The null hypothesis was established for each of the 15 EPPS variables and for the TSCS Total P scale. The .05 level of significance was imposed to determine statistically significant differences. Results of the computations showed no significant differences for any of the variables; thus no characteristics of academic underachievers were identified.

Description of the Procedures Used

The present study employed descriptive research to identify personality characteristics of academic underachievers by using psychological inventories to differentiate between various personality factors with regard to the two groups involved in the study. First, an effort was made to determine whether the self concept of academic underachievers differed significantly from the self concept of academic achievers. The Total P scale of the TSCS,

which supposedly gives information about the degree of the individual's self-esteem, was employed. Other personality variables were measured by use of the EPPS which attempts to measure 15 manifest needs.

In conducting the study, a list of 1966-67 Appalachian State University freshmen making combined SAT scores of 950 or better was compiled. From this group, pairs of subjects were matched on the basis of sex, SAT scores, and grade point average for the first two quarters of course work. Students were paired who had combined SAT subscores which differed not more than 30 standard score points, but who had dissimilar grade point averages--i.e., one member of the pair had a 2.0 average (on a 4.0 scale) while the other member had below a 2.0 average. After the matching process was completed, the sample consisted of 25 pairs.

The subjects completed an open-ended questionnaire, the purpose of which was to note any unusual socio-economic differences between the members of a pair which might affect the individual's academic achievement. The EPPS and the TSCS were administered to the students. Critical ratios were computed for the academic achievers and academic under-achievers on each of the 15 EPPS variables and for the Total P scale of the TSCS. The .05 level of significance was imposed and null hypotheses were established for each variable being considered.

Findings and Conclusions

No personality factors characteristic of academic underachievers were identified in the study. Critical ratios were computed for each variable considered, but no statistically significant differences were obtained on the 15 variables of the EPPS or on the Total P scale of the TSCS. Because of the limited size of the sample, inferences are made by the investigator where the findings only approached significance.

The reader should be cognizant of the fact that a larger number of pairs would increase the chances of getting critical ratios approaching the .05 level of significance. The fact that the differences between academic underachievers and academic achievers did approach significance on the EPPS variables of Achievement, Deference, Intraception, and Dominance makes possible the development of certain tentative hypotheses concerning personality differences between these two groups of students which can be investigated in future research.

The critical ratios computed for the academic underachievers and academic achievers showed that the latter approached the .05 level of significance in scoring higher on Achievement (1.83--i.e., .07 level of significance) and Deference (1.94--i.e., .052 level of significance). These results indicate that the academic achiever manifests a

higher need for achievement and conformity. Institutional press on the college campus seems to catalyze the need to achieve in the student of higher learning. Responding to the competitive system found on the campus, the achiever develops and uses his potential to succeed in the classroom and thereby gains the rewards which satisfy his strivings.

One learning theorist (Tolman, 1945) purports that learning is governed by the law of association by contiguity--i.e., learning plus the needs and skills of the individual govern performance. The student who has the skill, potential, and need to achieve will do so, and his achievement will be evidenced by his performance. The academic underachiever tends to lack the need to achieve in an academic setting; thus his skill and potential remain stored within him, or are manifested in other ways.

The academic achiever also manifests the need for Deference. Using the same learning theory as a basis for interpretation, the academically achieving student learns (acquires information about the environment with regard to the spatial and temporal patterning of stimulus events from receipt of stimulus to formation of a gestalt in the individual's experience) and performs in relation to his needs and skills.

Another learning theorist (E. L. Thorndike, 1932)

states that when a response is rewarded, the likelihood of its reoccurrence is increased when the same or a similar stimulus is experienced. A school rewards conformity by giving acceptance to the individual. Thus, a high need to conform--i.e., to follow instructions, to accept the leadership of other people, is manifested. The academic achiever feels accepted when he conforms to the expectations of the school; consequently, he repeats behavior which has been so rewarded. Since conformity has been reinforced, the conforming individual becomes tense and insecure when he deviates from normal behavior and is not rewarded by the power structure. To reduce this tension, the student conforms, regaining the acceptance by the significant others in his environment.

Being members of a conforming society, most teachers reward orthodox behavior, thereby penalizing the more creative individuals (Torrance, 1963). Torrance further hypothesizes that academic underachievers frequently are non-conforming, creative individuals, a factor which may actually account for their failures. Thus, the inference can be made that the student who is identified as an academic underachiever may be suffering from a society which penalizes him for his underachievement in one area, while failing to recognize his potential in another area which is extremely important to society itself.

Academic underachievers approached the .05 level of significance on the Intraception and Dominance variables (see Table 4). In terms of levels of significance, the last two factors approached the .05 level of significance since computations revealed that the respective critical ratios were -1.90 and -1.91. The academic underachievers apparently need to observe and analyze the actions of other people, and they need to persuade, to argue, and to influence others, as well as to be a leader and to supervise people.

The preceding description is one of non-conforming behavior--i.e., the individual deviates by his interrogation of existing attitudes before he accepts them, and by his manifest need to initiate and lead the action of other people. Such overt and dynamically manifest needs are characteristic of creative individuals and divergent thinking. Guilford (1965) maintains that creative people think divergently--i.e., in different directions of searching and seeking for variety, and that these non-conformists (a) are sensitive to problems left unnoticed by less creative persons, (b) are flexible in their thinking, (c) analyze and synthesize phenomena in the environment, (d) can shift meaning, (e) have a deeper understanding of things. Thus, Guilford's theoretical factors (b) and (c), and to a lesser extent (a) and (d), as just presented, have

been manifest as need tendencies of freshmen academic under-achievers at Appalachian State University.

The analytic, persuasive, argumentative behavioral tendencies of the underachiever may be a result of similar behavior which had been rewarded by other individuals during early childhood; however, such behavior may also be the manifestation of hostilities encapsulated in the individual since childhood. During adolescence these hostilities have found an exit through argumentation, leading others, observation, and analysis of behavior. So long as the aforementioned modes of behavior are not manifest in an extreme manner, such as arguments involving emotional anger and threats, the results may be constructive.

Another explanation may be that the energy required by the academic underachiever to manifest his hostilities, in some way, drains the power supplying energy for his academic performance. A less molecular way of stressing this position (Freud, 1938) would argue that the individual's attention is displaced by efforts at releasing bound-up hostilities and his time and attention are diverted from potential academic performance. The student then becomes an academic underachiever.

In conclusion, an institution needs to be concerned enough to plan programs including counseling which can help the student to cope with his hostilities. In Freudian

terms, he needs to sublimate his energies into more constructive, socially approved outlets such as classroom and laboratory work.

Recommendations for Further Research

As a result of the thesis study, the size of the sample employed, and the variables which approached significance, a cross validation study is recommended for the 1967-68 academic year. The same procedures used in the thesis approach to the problem would be engaged in the validity study, with data being collected on 25 or more matched pairs.

Dvorak's (1956) multiple cut-off method would be used to establish critical scores for the matched pairs on the Achievement, Deference, Intracception, and Dominance variables of the EPPS. The entire 1968-69 freshman class would take both the EPPS and TSCS and a list would be developed indicating potential achievers and underachievers.

Then on the basis of sex, combined SAT scores, and EPPS variables, a control group and an experimental group would be selected for the freshman class. The former group would be used as a criterion for denoting any significant differences which might occur in the experimental group as a result of the design of the study.

In an attempt to help potential underachievers perform to their capacities as manifest by SAT scores, the

experimental group would be placed into an academic course called Personal Adjustment. The purpose of the course is twofold: (a) a concrete attempt to satisfy the needs of the potential academic underachievers which have been identified as need tendencies of academic underachievers at Appalachian State University, (b) to establish for graduate majors who are specializing in junior college counseling a practicum in Guidance and Counseling.

The Personal Adjustment course would be taught by the graduate students in the junior college practicum which has been proposed by the Guidance and Counseling Department to begin in September, 1967. Each of the graduate majors would be given two or three groups of fewer than 10 potential academic underachievers with whom to counsel and teach. The course content would include basic life adjustment theories in an effort to help the student identify his needs and to cope with them more effectively. The need tendencies manifest as characteristic of Appalachian State University academic underachievers would be the primary variables of concern.

At the end of the academic year, the academic underachievers would be identified by the criteria of grade point averages and combined SAT scores. A complete statistical study showing the degree of similarity on the 15 EPPS variables and on the Total P scale of the TSCS between the

control and experimental groups, both before and after the Personal Adjustment course would be necessary.

From the study outlined above, the need tendencies manifest by academic underachievers in the thesis sample would either be accepted or refuted. Although the Total P scale did not approach significance in the thesis study, due to the facts that (a) significant differences between the self concepts of achievers and underachievers have been noted in other research studies (Congdon, 1964; Roth, 1959), and (b) the results in the thesis sample tended to be inverse to those in the research, the investigator recommends further study of the self concept variable with regard to underachievement. Finally, from the statistical results, a presentation and interpretation of the findings, whether or not significant differences between the two groups exist, would be enlightening when interpreted with regard to the results presented in the thesis.

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APPENDIX

Table A

Relationship Between SAT-V Scores Made by Appalachian State Teachers College Freshmen (1965-66) and the Number and Per Cent of Students Who Appear in Certain Categories Frequently Employed as Criteria of Success and Failure in College

SAT-V score interval	N	Number and per cent below 1.25	Number and per cent 1.25-1.99	Number and per cent 2.00-2.99	Number and per cent 3.00-3.99	Number and per cent who withdrew
700-749	1				1 (100%)	
650-699	5		2 (40%)	1 (20%)	2 (40%)	
600-649	21		1 (5%)	14 (67%)	6 (29%)	
550-599	60	2 (3%)	13 (22%)	25 (42%)	18 (30%)	2 (3%)
500-549	126	11 (9%)	36 (29%)	59 (47%)	18 (14%)	2 (2%)
450-499	202	22 (11%)	58 (29%)	100 (50%)	19 (9%)	3 (1%)

(Table continued on next page)

Table A (Continued)

400-449	360	39 (11%)	7-2 7-1	131 (36%)	1-2 2-1	161 (45%)	2-1 2-1	21 (6%)	8 (2%)
350-399	299	46 (15%)	6-2 7-1	137 (46%)	5-2 4-1	105 (35%)	1-2 1-2	7 (2%)	4 (1%)
300-349	142	29 (20%)	5-2 7-1	70 (49%)	2-1	41 (29%)			2 (1%)
250-299	35	5 (14%)	2-2 1-1	22 (63%)		8 (23%)			

The small digits indicate the number of freshmen completing fewer than three quarters of work with the first digit representing the number of students and the second digit, the number of quarters upon which the quality point ratio is computed.

Note.--Reproduced from data sheet compiled by William A. Floyd, director of testing at Appalachian State University.

Table B

Relationship Between SAT-M Scores Made by Appalachian State Teachers College Freshmen (1965-66) and the Number and Per Cent of Students Who Appear in Certain Categories Frequently Employed as Criteria of Success and Failure in College

SAT-M score interval	N	Number and per cent below 1.25	Number and per cent 1.25-1.99	Number and per cent 2.00-2.99	Number and per cent 3.00-3.99	Number and per cent who withdrew
700-749	1			1 (100%)		
650-699	8		3 (38%)	3 (38%)	2 (25%)	
600-649	24	1 (4%) 1-1	5 (21%) 1-1	8 (33%)	10 (42%)	
550-599	83	4 (5%) 1-1	16 (19%) 1-1	36 (43%) 1-2	21 (25%)	6 (7%)
500-549	178	13 (7%) 2-2 2-1	53 (30%) 1-1	87 (49%) 1-2 3-1	20 (11%) 1-2	5 (3%)
450-499	288	22 (8%) 3-2 5-1	109 (38%) 2-1	130 (45%)	22 (8%)	5 (2%)

(Table continued on next page)

Table B (Continued)

400-499	408	67 (16%)	10-2 13-1	170 5-2 (42%) 2-1	156 3-1 (38%)	11 (3%)	4 (1%)
350-399	229	45 (20%)	9-2 6-1	98 2-2 (43%) 2-1	81 1-2 (35%) 2-1	5 1-2 (2%)	
300-349	30	5 (17%)	1-1	12 (40%)	11 1-1 (37%)	1 (3%)	1 (3%)
250-299	2	1 (50%)			1 (50%)		

The small digits indicate the number of freshmen completing fewer than three quarters of work with the first digit representing the number of students and the second digit, the number of quarters upon which the quality point ratio is computed.

Note.--Reproduced from data sheet compiled by William A. Floyd, director of testing at Appalachian State University.

Table C

Relationship Between Combined V and M Scores on SAT Made by Appalachian State Teachers
College Freshmen (1965-66) and the Number and Per Cent of Students Who Appear
in Certain Categories Frequently Employed as Criteria
of Success and Failure in College

Combined SAT score interval	N	Number and per cent below 1.25	Number and per cent 1.25-1.99	Number and per cent 2.00-2.99	Number and per cent 3.00-3.99	Number and per cent who withdrew
1300-1399	1			1 (100%)		
1200-1299	17		3 (18%)	7 (41%)	7 (41%)	
1100-1199	41	2 (5%)	7 (17%)	13 (32%)	18 (44%)	1 (2%)
1000-1099	139	6 (4%)	26 (19%)	76 (55%)	28 (20%)	3 (2%)
900-999	290	18 (6%)	93 (32%)	152 (52%)	22 (8%)	5 (2%)

(Table continued on next page)

Table C (Continued)

800-899	425	60 (14%)	11-2 9-1	181 (43%)	5-2 5-1	162 (38%)	2-1	16 (4%)	6 (1%)
700-799	320	61 (19%)	9-2 15-1	152 (48%)	1-2 2-1	100 (31%)	1-2	1 (0%)	6 (2%)
600-699	18	5 (28%)	2-2	9 (50%)		4 (22%)			

The small digits indicate the number of freshmen completing fewer than three quarters of work with the first digit representing the number of students and the second digit, the number of quarters upon which the quality point ratio is computed.

Note.--Reproduced from data sheet compiled by William A. Floyd, director of testing at Appalachian State University.

Questionnaire for Thesis Study

Please fill in the following blanks:

Your name: _____

Your home address: _____

Your school address: _____

Number of students in the high school which you attended: _____

Mother's vocation: _____

Father's vocation: _____

Number of brothers older: _____ younger: _____

Number of sisters older: _____ younger: _____

Your church affiliation: _____

Your major: _____

Your vocational plans: _____

Where do you do most of your studying (library, dorm, etc.)?

Why did you come to college? _____

Why did you choose Appalachian State Teachers College? _____

Are you on a scholarship? _____

Are you working your way through school? _____

Do you believe in life after death? _____

Do you believe in a god? _____

If yes, please answer the following questions:

- 1) do you believe that this god exists as a human form
in a heaven somewhere? _____

Questionnaire (Continued)

- 2) do you believe that this god is an invisible supernatural being, but one which can talk to you just as you talk verbally with a friend? _____
- 3) do you believe that this god exists in the universe as part of the physical elements and does not really talk with you, but can communicate in some physical capacity which is presently unknown to man? _____
- 4) do you believe that this god is responsible for every action that you take or make? _____
- 5) do you believe that this god created the universe, set it into motion, and that you are now on your own with the complete ability to make your own decisions? _____.
- 6) do you feel a personal attachment to this god? _____
- 7) do you feel that this god is like a parent to you? _____.
- 8) do you feel that this god is like a friend to you? _____.

If you do not believe in a god, is there anyone or anything which you love and/or respect more than any other person or thing? _____

If it is a person, what is it about him or her that you love or respect so greatly? _____

If it is an inanimate object, why do you value it so greatly? _____

If it is an inanimate object, what is it? _____

When you become depressed or upset about something, what is your course of action for overcoming this state? _____

April 13, 1967

Dear Student:

You are asked to participate in an important study being made at Appalachian by Miss Penny Demetriades, a graduate student in the area of testing.

The study involves the administration of certain psychological tests to a highly selected group of approximately 50 students. You are in this group and are urged to take the tests.

THE TESTS WILL BE GIVEN MONDAY, APRIL 17, AT 6:30 P.M. IN ROOM 204 OF THE OLD EDUCATION BUILDING. THE TESTS SHOULD TAKE LESS THAN 90 MINUTES.

Results of the tests will be used as data in a thesis which Miss Demetriades is writing, and her findings will be useful in formulation of future college policies. Names of persons taking these tests will not appear in any publication, nor will they be used in any other way whatsoever.

I very much hope you can accept this invitation to be of real service to the college, to future generations of students and to Miss Demetriades. Remember--the time is Monday, April 17, at 6:30 p.m., and the place is the Old Education Building, Room 204.

Sincerely,

Testing Center
Old Education Building
A. S. T. C.
Boone, North Carolina
May 2, 1967

Dear Student:

Presently I am here at A. S. T. C. completing requirements for my M. A. degree in Guidance and Counseling; however, in order to finish my work I need your help in writing a thesis. Your part includes filling out 3 information inventories (one is enclosed) which would take about 70 minutes of your time.

Due to the fact that the number of students in the sample is limited, I need the help of each one of you so that this thesis will be acceptable to the thesis committee. The design of the thesis requires that you be paired with another A. S. T. C. freshman on the basis of S. A. T. scores. This means that if one of the pair cooperates and the other does not, then the sample is reduced, the resulting information less reliable, and there is a chance that the thesis cannot be completed. Since about three months of research work depends on the outcome of these information sheets I'd really appreciate your coming by the Testing Center, 204 Old Education Building, and filling in the information sheets on this Thursday evening (May 4) at 6:30. If this time does not suit your schedule, when you fill out the enclosed information sheet please indicate a time for this Friday, Saturday, or Monday which would be convenient for you, or call the Testing Center, ext. 295, and make an appointment.

Again, I'd really appreciate your helping me with this. Hope to see you Thursday (May 4) at 6:30 in room 204 Old Education Building (or any time which suits you). Don't forget to bring the enclosed information sheet completed. Thank you.

Sincerely yours,

Penny Demetriades

enclosure

Table D

Adapted "Source of Income" Table*

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1. Inherited money used as the basic income of an individual or family unit.
 2. Wealth accumulated during one's working life; not inherited or gift money.
 3. Money made from fees, profits, and royalties.
 4. Income based on monthly or yearly stipend.
 5. Income received on a weekly basis.
 6. Intermittant income received from "odd jobs," also private relief.
 7. Charity and public aid; non-reputable incomes.
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Note:--Above table adapted from McGuire, C. & White, G. D. The measurement of social status. Unpublished manuscript, The University of Texas, March, 1955.